

Missouri Health Improvement Plan



2013 - 2018

Revised September 2014

Missouri Department of Health and Senior Services



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Executive Summary

Background

The Missouri Department of Health and Senior Services (DHSS), through its vision, mission, and values, serves the citizens of the state. The health department's vision is *healthy Missourians for life*. The organizational mission is to be the leader in promoting, protecting and partnering for health. DHSS is seeking national accreditation and in January 2013 initiated a joint effort involving the development of a State Health Assessment (SHA) and a process to develop a State Health Improvement Plan (SHIP). To assure that the process included input from key stakeholders, a diverse group (sector and geography) of over 30 public health system partners and stakeholders from across the state was identified to support the assessment activities. This Public Health System Partners Group offered valuable efforts and time in the completion of multiple assessments, as well as the development of strategic priority issues.

The Assessments

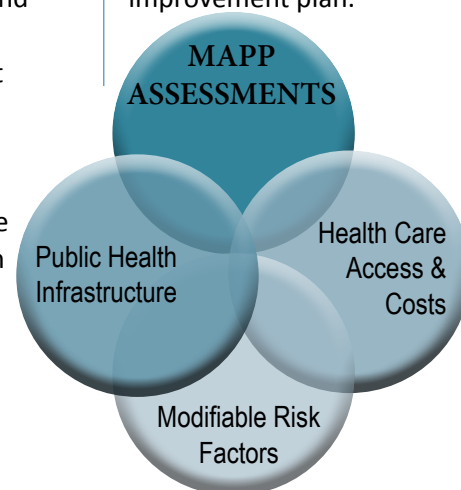
The SHA utilized a case study design to determine the health status of the residents in the state of Missouri. Two theoretical frames for public health planning guided the assessment activities; Mobilizing for Action through Planning and Partnership (MAPP) and the PRECEDE-PROCEED Model. Four assessments form the foundation of the MAPP process (Community Themes and Strengths, Local Public Health System, Community Health Status and Forces of Change). From January through June of 2013, DHSS completed activities using all four assessments.

Summary of Outcomes

Place matters when it comes to both health determinants and health outcomes. In the 2012 America's Health Ranking Report, the rankings for Missouri's health determinants range from 23rd (low birth weight) to 46th (immunization coverage), while the health outcome indicators range from 29th (geographic disparity) to 41st (premature deaths). In Missouri, as in many states, health varies from one region to another. The worst burden of risks and adverse outcomes in the State of Missouri are with citizens in the Southeast region. Across the state, citizens' and stakeholders' perceptions about the impact of economics and lack of insurance converge with the health status indicators that show the decline in insurance and increase in persons living below the poverty level. Both citizens and stakeholders shared their concerns about fiscal challenges in their households, organizations and communities and the impact on the health of Missourians.

Key Issues

Strategic issues reveal the changes that must occur in order for the vision of the health improvement plan to be achieved. The results of the MAPP assessments offer important contextual information and the foundation for creation of Missouri's statewide health improvement plan. Using the outcomes of the four MAPP assessments, the Public Health System Partners Group identified 10 key issues—uninsured, smoking, economics, mental health and substance abuse, health services access and costs, modifiable risk factors, commitment and collaboration through partnerships, assure workforce, and performance management and quality improvement. The 10 key issues converged into three overarching areas that shaped the development of the state health improvement plan.



State of Missouri Profile

The Institute of Medicine defines public health as what society does collectively to assure conditions for people to be healthy.⁶ More specifically it is one of many efforts

- Ensure Missourians are healthy, safe, and informed.
- Maximize health and safety outcomes.
- Engage and invest in our staff.
- Position resources to ensure maximize returns.



Journey to Improvement

After more than six years of exploration and investigation, the Centers for Disease Control and Prevention (CDC), in collaboration with the Robert Wood Johnson Foundation, is supporting a national voluntary accreditation program for public health agencies. Formed in May 2007, the Public Health Accreditation Board (PHAB) is a non-profit entity that oversees the accreditation process. PHAB is working to promote and protect the health of the public by advancing the quality and performance of all public health departments in the U.S. through national public health department accreditation.⁹ PHAB's vision is a high-performing governmental public health system that leads to a healthier nation. For a public health department to be accredited, it must meet stringent requirements for the 10 essential services of the core public health functions and demonstrate a commitment to constant improvement. Figure 1 depicts the 10 essential public health services.

In its efforts to become nationally accredited, in January 2013 DHSS initiated a joint effort involving the development of a State Health Assessment (SHA) and a process to develop a State Health Improvement Plan (SHIP). The purpose of the State Health Assessment was to learn about the health status of the population that DHSS serves. It describes the health status of the population, identified areas for health improvement, determines factors that contribute to health issues and identifies assets and resources that can be mobilized to address population health improvement.

DHSS engaged a consulting firm (Research and Evaluation Solutions, Inc.—REESSI) to facilitate and support the development of the state health assessment and the

identification of a preliminary set of priority issues for improvement. The activities included receiving input and feedback from a cross-section of citizens and key public health stakeholders in the state.

To assure that the assessment process included input from key stakeholders, a diverse group (sector and geography) of over 30 public health system stakeholders from across the state were identified to assist throughout the assessment process. This Public Health System Partners Group was critical in two of the assessments, the forces of change assessment and the public health system assessment, as well as the development of strategic priority issues to be addressed in the State Health Improvement Plan.

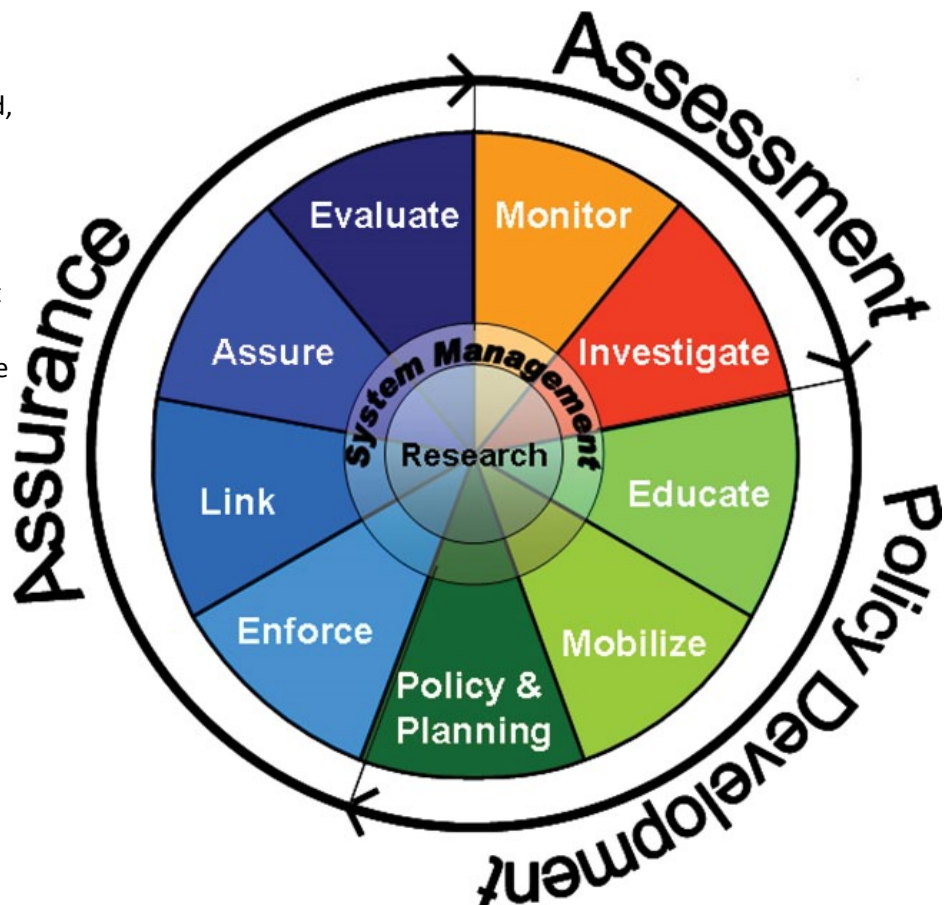


Figure 1 – The 10 Essential Public Health Services

Assessment Process

The development of the state health assessment utilized a case study design to determine the health status of the residents in the state of Missouri. Two theoretical frames for public health planning guided the assessment activities—Mobilizing for Action through Planning and Partnership (MAPP) and the PRECEDE-PROCEED Model.

MAPP is a comprehensive, community-based approach to community health improvement. Through MAPP, stakeholders in States and local communities seek to achieve optimal health by identifying and using their resources wisely, taking into account their unique circumstances and needs, and forming effective partnerships for strategic action.

The MAPP process is designed to lead to development and implementation of a strategic plan for public health improvement. The plan requires the engagement of both citizens and professional stakeholders who hold strong commitments to the community's health and overall well-being. MAPP focuses on strengthening the whole system rather than separate pieces, consequently bringing together diverse interests to collaboratively determine the most effective way to conduct public health activities. Figure 2 illustrates the MAPP process.

Four major assessments are key elements of the MAPP—1) Community Themes and Strengths Assessment, 2) Local Public Health System Assessment, 3) Community Health Status Assessment, and the 4) Forces of Change Assessment. Each of these assessments provides a critical foundation and contextual information to develop a realistic and feasible health improvement plan. Summaries of the four assessments are located in the Appendices.

The PRECEDE-PROCEED frame uses an ecological and educational approach that respects context. The assessment team used elements of the PRECEDE-PROCEED model that focus on social and epidemiological-behavioral-environmental assessments and situational analysis. The complete report of the state health assessment process, Missouri State Health Assessment 2013 can be found at: health.mo.gov.



Figure 2 – MAPP Process

Vision and Values

The second phase of the MAPP process involves the development of a vision and set of values for the health improvement plan. The shared vision and values offer purpose, direction and focus for the process. Moreover, the values help to mobilize the stakeholders to achieve the shared vision.

On June 19, 2013, 22 members of the Missouri Public Health System Partner Group engaged in activities that led to the creation of a shared vision and eight core values. The group emphasized the need for the vision and values to have a broad appeal to the existing stakeholders, nontraditional partners (e.g., economic development entities, businesses) that will join the group in the future, residents, and visitors to the state.

Supporting Values Statements*:

1. We are committed to assuring that the Missouri public health system is inclusive of, and sensitive to, all populations and communities in meeting their diverse health needs.
2. We support and encourage equitable access to and the quality of the public health system.
3. We promote influential leadership in the public health system to advocate for a healthy Missouri.
4. We are committed to collaborating for shared goals, risks, rewards, resources, and leadership.
5. We value integration and collaboration with partners to generate ongoing discovery to translate and implement new information and technology for public health practice.
6. We are committed to informing citizens and policymakers about health issues to encourage healthy behaviors and impact policy decisions.
7. We support and advance programs and policies that are data driven and based on the best available evidence or contribute to the research base of best practices.
8. We engage in responsible stewardship of public and private resources, transparency, and timely action to achieve accountability.

**The original statements were edited for clarity and grammar.*

Vision Statement

Missouri is a state of health: Top 10 in 10

The byline demonstrates the partners' desire and commitment to the state being rated in the top 10 for health outcomes within 10 years.

Priority Health Issues

The four MAPP Assessments (community themes and strengths assessment, state public health system assessment, forces of change assessment, and state health status assessment) led to the identification of areas of weakness that formed common themes from which the strategic issues were identified. To assure that issues in each of the assessment categories received consideration, priority issues from each of the four assessments were identified. These strategic issues reveal the changes that must occur in order for the vision of the health improvement plan to be achieved. Strategic issues have several characteristics that separate them from findings identified earlier in the planning process.

- 1) They represent a fundamental choice to be made at the highest levels of the community and local public health system. They focus on what will be done, who will be served, and by whom services will be provided.
- 2) Strategic issues usually center around a tension or conflict to be resolved. Such tensions or conflicts may be related to differences between: past ways of doing things and future demands, current capacities and capacities necessary for delivering the Essential Services, the role of the local health agency and the roles of other community agencies, and the needs of the community and the resources available to meet those needs.
- 3) Strategic issues have no obvious best solution. If there is an obvious immediate solution to an issue, then question why it has not been implemented before. Such issues are likely to be operational concerns for individual organizational participants rather than strategic issues for the public health system.
- 4) A strategic issue must be something the local public health system can address. If an issue cannot be addressed by the local public health system, it may be strategic, but not at the community level. Issues such as universal health insurance coverage, poverty cessation, or eradicating a wide spread disease may be seen as strategic on a national level, however, few localities would have the means to take them on.

The results of the MAPP assessments offer important contextual information and the foundation for creation of the state health improvement plan. The state surveillance data on health determinants and health outcomes reveal the health status of citizens and often show disparities based on region, race, age and gender. Moreover, the health status data point to possible health goals, and issues that require responses and action. The community themes and strengths assessment gives meaning and context to the indicators data and offer the opinions and experiences of the citizens and stakeholders. The public health system assessment reveals both the strengths and weaknesses of the public health infrastructure. The quality and effective functioning of this system is integral to the health and well-being of those being served. Plans for addressing health issues must be realistic and considerate of the threats and opportunities that may impact both the public health system and the health of the public. The forces of change assessment guides public health partners through the careful exploration of external forces that may influence the implementation of the health improvement plan. Using the outcomes of the four MAPP assessments, the Public Health System Partners Group defined the three top strategic issues as follows:

1. Access to health care
 - Health care access, high cost of health care and high rate of uninsured
 - Economy – access to resources necessary to be healthy including affordable options for good nutrition, physical activity and preventive health care services
2. Modifiable risk factors
 - Obesity
 - Smoking
 - Mental health/substance abuse
3. Infrastructure issues
 - Mobilizing partnerships
 - Performance Management/Quality Improvement
 - Workforce development

These issues serve as the foundation of this health improvement plan. The Partners Group enlisted additional subject matter experts to help address all the issues identified for inclusion in the plan and to develop goals and objectives that encompassed these issues. Over the next few months, the partners worked in groups based on the priority health issues to develop goals and objectives around each using processes and tools from the University of Kansas, The Community Tool Box and MAPP Clearinghouse tools from the National Association of County and City Health Officials. To align their work with national objectives, workgroups referred to Healthy People 2020, the National Prevention Strategy, and the Health and Human Services Action Plan to Reduce Disparities and adopted or aligned with objectives where applicable. When choosing strategies for each issue, workgroups considered the Centers for Disease Control and Prevention (CDC) Winnable Battles (known effective strategies for improving outcomes within five years) and the recommendations from the CDC's Community Guide. In addition, work groups considered other state and local plans and those related goals and objectives to align work whenever feasible.

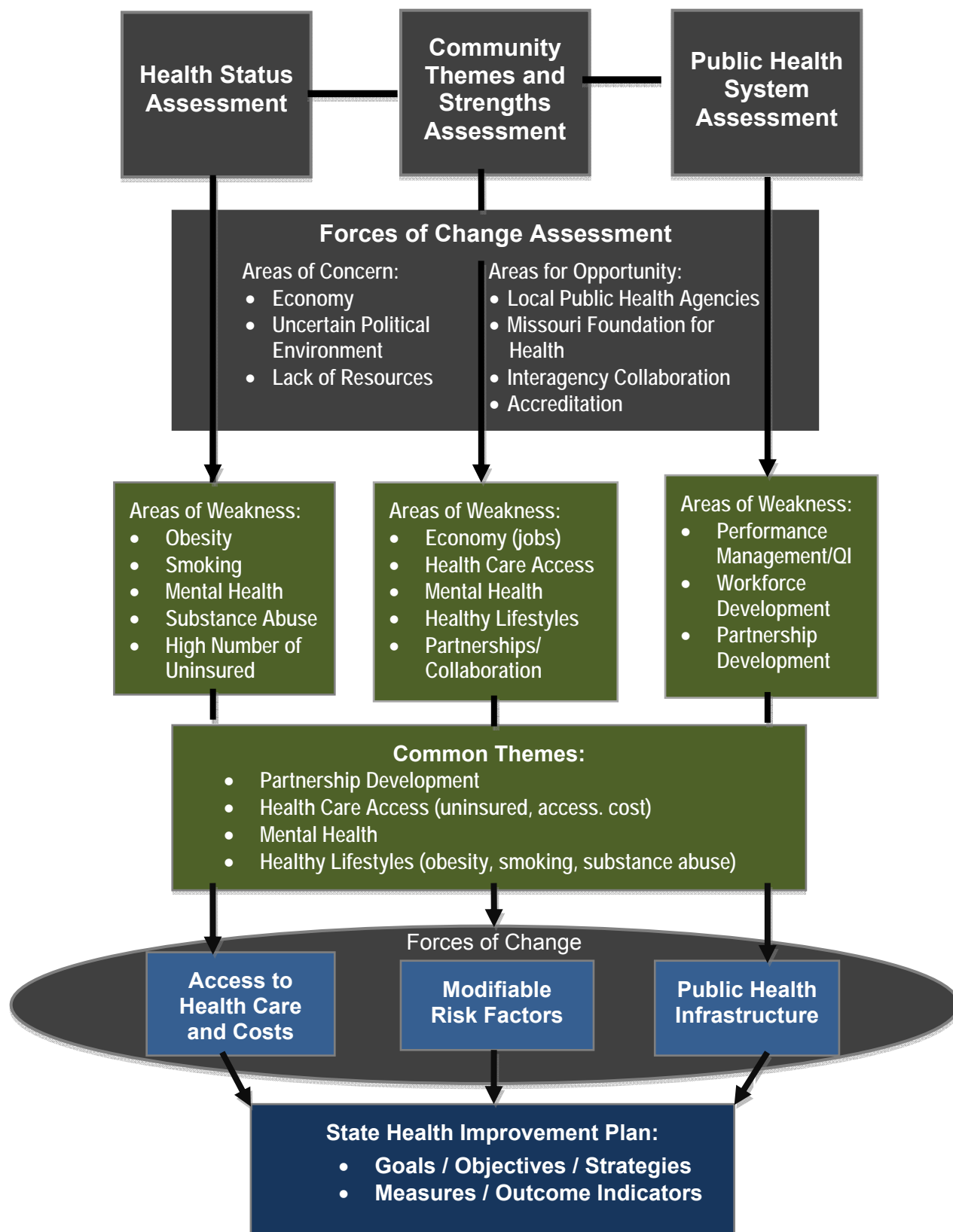
These efforts culminated in this Missouri Health Improvement Plan 2013 - 2018. Improvement strategies and outcome indicators are located in the Missouri Health Improvement Implementation Plan and are reviewed and updated as needed. These documents make up a long-term, systematic effort to address public health problems based on the results of community health assessment activities and the community health improvement process. This plan will be used by health and other governmental education and human service agencies, in collaboration with community partners, to set priorities, coordinate efforts, and acquire resources. The plan will also be important for the development of policies and defining actions for directing efforts that promote health.

DHSS is only one part of the public health system. Other agencies, organizations, institutions and coalitions play vital roles in the health of Missourians. The ongoing health improvement processes and the plan itself each reflect efforts of many of the key partners in the public health system to promote collaboration, coordination and efficiency. Future actions will include reports based on progress related to the goals and objectives resulting from the efforts of the public health system working together.

Figure 3 illustrates how the Missouri process linked the four MAPP assessments to the three overarching strategic issues of health care access and costs, modifiable risk factors, and public health infrastructure which then led to the development of goals and objectives for the state health improvement plan.



Figure 3: MAPP Assessments Linked to Priority Health Issues and to the SHIP



Priority Issue 1: Access to Health Care

- Health care access, high cost of health care and high rate of uninsured
- Economy – access to resources necessary for health including affordable options for good nutrition, physical activity and preventative health care services

Issue 1, Goal 1:

Missourians will have access to comprehensive, quality, affordable health care.

Access to comprehensive, quality health care services is important for the achievement of health equity and for increasing the quality of life for everyone. While the current unemployment rate in Missouri has dropped in recent years, the numbers of people living below the federal poverty level and the percentage of uninsured Missourians have both increased. Missouri ranks low in the nation for preventable hospitalizations, which are those that better primary care could have prevented. The state of the economy and resulting lack of jobs providing adequate health insurance is a grave concern of the citizens interviewed. Focus groups participants also revealed that access to health care providers is difficult in some communities due to limited office hours and distance to services, especially in rural areas. Limited numbers of health care professionals accept Medicaid or Medicare, limiting access for many people. See appendices for more information on Missouri's assessment findings.

Objective 1.1: By 2018, decrease the percentage of Missourians 18 and over who report having no health insurance coverage from 17.5% to 10%.

Performance Measure:

- No health care coverage

Partners and Stakeholders: Missouri Foundation for Health, Cover Missouri Coalition, Primaris, DHSS, Missouri Primary Care Association, Missouri Association of Area Agencies on Aging, Health Literacy Missouri

Alignment with national, state, and local goals, objectives and measures:

Healthy People 2020, Health and Human Services Action Plan to Reduce Racial and Ethnic Health Disparities, Health Literacy Missouri

Objective 1.2: By 2018, decrease the number of Missourians who had to delay necessary medical care due to lack of access to affordable, quality, comprehensive health care.

Performance Measures:

- Needed to see a doctor in past 12 months but could not because of cost - Behavioral Risk Factor Surveillance System (BRFSS)
- Think of one person as personal doctor or health care provider - BRFSS

Partners and Stakeholders: MO HealthNet, DHSS, Primaris, Missouri Hospital Association, Missouri Primary Care Association, Missouri Foundation for Health

Alignment with national, state, and local goals, objectives and measures:

Healthy People 2020, DHSS Strategic Plan, Rural Health Plan, Health and Human Services Action Plan to Reduce Racial and Ethnic Health Disparities



Objective 1.3: By 2018, increase the primary care workforce in underserved areas of Missouri.

Performance Measure:

- Number of physicians
- Number of psychiatrists
- Number of dentists

Partners and Stakeholders: DHSS, University of Missouri School of Medicine and Washington University School of Medicine

Alignment with national, state, and local goals, objectives and measures: Rural Health Plan, World Health Organization Global Policy Recommendations

Objective 1.4: By 2018, decrease the number of indicators for healthcare quality that are below the national benchmark.

Performance Measures:

- Percent of adults age 18 and over who have had their blood cholesterol checked within the last five years – Agency for Healthcare Research and Quality (AHRQ)
- Admissions for uncontrolled diabetes without complications per 100,000 population, age 18 and over – AHRQ
- Admissions with diabetes with short-term complications per 100,000 age 18 and over – AHRQ
- Admissions with hypertension per 100,000 population, age 18 and over – AHRQ

Partners and Stakeholders: Primaris, Missouri Hospital Association, Missouri Primary Care Association, DHSS, Health Literacy Missouri, MO HealthNet

Alignment with national, state, and local goals, objectives and measures: *Healthy People 2020*

Priority Issue 2: Modifiable Risk Factors

- Obesity
- Smoking
- Mental health/substance abuse

Issue 2, Goal 1:

Missourians will achieve optimal health through reduction of modifiable risk factors.

A broad range of personal, social, economic and environmental factors that influence health status are known as determinants of health. These interrelated factors determine both population and individual health outcomes. In 2011, Missouri's obesity rate was 30.2 percent, compared to the U.S. rate of 27.7 percent. Missouri's smoking rate of 23 percent is higher than the U.S. rate of 21.2 percent. In Missouri the heavy drinking rate for males of 9.5 percent is significantly higher than the rate for females at 5.3 percent. While citizens revealed their dismay over the chronic disease and mortality burdens in Missouri, they believe that economic issues take precedence over health outcomes. They described how expensive it is to live healthy, given the high cost of nutritious foods and the lack of safe and affordable venues for physical activity. See appendices for more information on Missouri's assessment findings.

Objective 2.1: By 2018, decrease the prevalence of obesity among adults from 30.2% to 27.2% and among high school students from 15.4% to 13.8%.

Performance Measures:

- Prevalence of obesity among adults – BRFSS
- Prevalence of obesity among high school students – Youth Risk Behavior Survey (YRBS)

Partners and Stakeholders: DHSS, Missouri Council on Activity and Nutrition (MOCAN), Department of Elementary and Secondary Education

Alignment with national, state, and local goals, objectives and measures:

MOCAN Strategic Plan 2010, DHSS Strategic Plan, DHSS Obesity Initiative Plan, DHSS Missouri Actions to Prevent Chronic Diseases (MAP), Missouri Foundation for Health Childhood Obesity Prevention Initiative, Healthy People 2020, National Prevention Strategy, CDC Winnable Battles

Policy changes needed to accomplish objective: Adoption of policies that increase access to healthy foods in child care facilities and schools, adoption of policies that encourage healthy foods in worksites and communities, adoption of policies for Livable Streets, adoption of policies that increase comprehensiveness and quality of physical activity programs in schools, and adoption of policies that increase physical activity in child care facilities and worksites.

Objective 2.2: By 2015, decrease current cigarette smoking among adults from 25% to 19.3% and among high school students from 18.1% to 13.2%.

Performance Measures:

- Current cigarette smoking among adults – BRFSS
- Current cigarette smoking among high school students – YRBS

Partners and Stakeholders: DHSS, Tobacco Free Missouri

Alignment with national, state, and local goals, objectives and measures:

Comprehensive Tobacco Control Program (CTCP) Strategic Plan 2012 – 2015 Update, Healthy People 2020, Department of Mental Health (DMH) Strategic Plan for Prevention 2010 – 2015, National Prevention Strategy, CDC Winnable Battles



Policy changes needed to accomplish objective: adoption of tobacco prevention policies in schools.

Objective 2.3: By 2015, increase the percent of Missourians who are protected from secondhand smoke from 23% to 33% (in all indoor public places and indoor work places) by initiating a statewide comprehensive smoke-free ordinance.

Performance Measures:

- Protection from second hand smoke – Program Data

Partners and Stakeholders: Tobacco Free Missouri, DHSS

Alignment with national, state, and local goals, objectives and measures: CTCF Strategic Plan 2012 – 2015 Update, Healthy People 2020, National Prevention Strategy, CDC Winnable Battles

Policy changes needed to accomplish objective: Adoption of statewide comprehensive smoke-free ordinance.

Objective 2.4: By 2018, reduce prevalence of substance abuse as a result of implementing effective and evidenced-based programs.

- Reduce alcohol and drug use among youth
- Reduce alcohol and drug use among pregnant women
- Reduce alcohol and drug use among general population

Performance Measures:

- Alcohol and marijuana use among youth - National Survey on Drug Use and Health (NSDUH), YRBS
- Alcohol, marijuana and drug use among general population - NSDUH
- Alcohol use among pregnant women - Pregnancy Risk Assessment Monitoring System (PRAMS)

Partners and Stakeholders: Department of Mental Health (DMH), DHSS

Alignment with national, state, and local goals, objectives and measures: DMH Strategic Plan for Prevention 2010 – 2015, *Healthy People 2020*.

Priority Issue 3: Infrastructure

- Mobilizing partnerships
- Performance Management/Quality Improvement
- Workforce development

Issue 3, Goal 1:

Missouri will have the necessary infrastructure for an effective public health system.

The state public health system assessment offered a comprehensive review of all of the organizations and entities that contribute to the public health system in Missouri. It showed that the weakest essential service area is in assuring the competence of the workforce followed by mobilizing partnerships. A summary of the average scores for all 10 essential service areas across the four model standards showed performance management and quality improvement as scoring the lowest. The stakeholders interviewed believe that collaboration is important to the sustainability of their agencies' missions. The declining funds and resources from both government and non-government sources require partnerships that allow them to get things done more efficiently. See appendices for more information on Missouri's assessment findings.

Objective 3.1: By 2018, increase the number of local public health agencies that has a workforce development plan.

Performance Measures: Number of LPHAs that report having a workforce development plan - LPHA Infrastructure Survey

Partners and Stakeholders: Public Health Interagency Task Force for Workforce Infrastructure including membership from DHSS, Ozarks Public Health Institute, Missouri Institute for Community Health, Missouri Association for Local Public Health Agencies, Missouri Foundation for Health, Lindenwood University School of Nursing, University of Missouri Master of Public Health Program, Missouri State University Master of Public Health Program, Saint Louis University College for Public Health and Washington University George Warren Brown School of Social Work.

Alignment with national, state, and local goals, objectives and measures: *Healthy People 2020*, HHS Action Plan to Reduce Racial and Ethnic Health Disparities, The Health Care Delivery System: A Blueprint for Reform

Objective 3.2: By 2018, increase the number of professionals who graduate from a public health school/program in Missouri with a degree in public health who work in public health in the state for one year or longer after graduation to 5% above baseline.

Performance Measures:

- Number of graduates with Master's of public health working in public health in Missouri for one or more years
- Number of graduates with a Bachelor's degree with an emphasis in public health working in public health in Missouri for one or more years

Partners and Stakeholders: Public Health Interagency Task Force for Workforce Infrastructure

Alignment with national, state, and local goals, objectives and measures: *Healthy People 2020*, HHS Action Plan to Reduce Racial and Ethnic Health Disparities



Objective 3.3: By 2018, increase the number of local public health agencies and community health centers that are accredited by 10.

Performance Measures:

- PHAB accredited health departments
- MICH accredited health departments
- Community Health Centers accredited by Accreditation Association for Ambulatory Health Care, Inc. (AAAHC) or The Joint Commission

Partners and Stakeholders: DHSS, Missouri Primary Care Association, Missouri Institute for Community Health, Public Health Accreditation (PHAB) Exchange

Alignment with national, state, and local goals, objectives and measures:
Healthy People 2020

Objective 3.4: By 2016, adopt and implement evidence-based model(s) for reviewing the effectiveness of public health system partnerships.

Performance Measures: Evidence-based models adopted and implemented

Partners and Stakeholders: DHSS, Missouri Public Health System Partners, Practice-based Research Network (PBRN)

Alignment with national, state, and local goals, objectives and measures:
Healthy People 2020

State Health Assessment Findings

Background

The state health assessment identifies priority issues associated with community health and quality of life using social and epidemiological data. Questions answered relate to the overall health and quality of life of the citizens in the state.

Data Collection and Analyses

The assessment team used the County Health Rankings Model (University of Wisconsin Population Health Institute) as a framework and guide for collecting and grouping indicator data (see Figure 1).¹⁰ The data groups are defined as Health Outcomes: Mortality and Morbidity Measures across several disease and event categories and Health Factors: Behavioral, Clinical Care, Social and Economic, and Environmental.

DHSS staff identified a final set of 19 priority indicators. The DHSS epidemiology team provided most of the datasets and REESSI staff secured the data on substance abuse, mental health, and bullying. The indicators are summarized in Table 1. Using the *Healthy People 2020* objectives as a guide, the assessment team constructed five categories of health determinants and outcomes to present to the citizens during the informational and focus group meetings. The categories are summarized in Table 2.

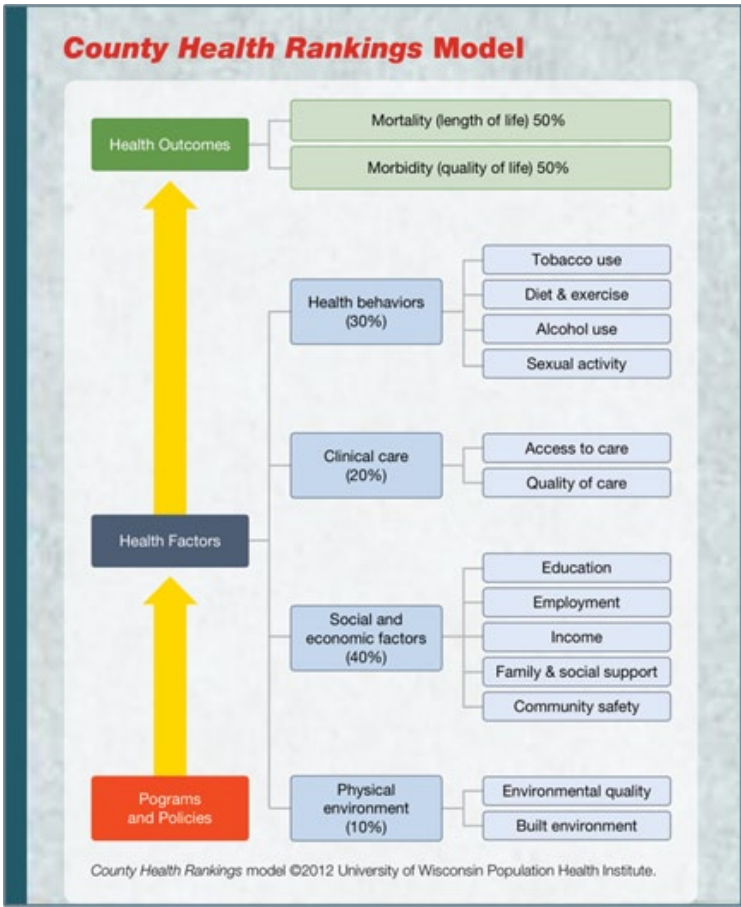


Table 1: Key Indicators included in the Assessment

Indicator Data Category	Indicators
Health Determinants (Factors) (N=10)	Poverty; Median Household Income; High School Graduation (≥ age 25); Employment Status; Obesity; Smoking; Heavy Drinking; Uninsured; ER Visits; and Preventable Hospitalizations (< age 65)
Health Outcomes (N=9)	Overall Mortality; Leading Causes of Mortality; Infant Mortality; Life Expectancy; STD/HIV; Suicide; Depression; Drug Arrests; and Bullying

The assessment team received and organized the data into regional presentation charts and prepared side-by-side comparison reports in Excel for the counties in each of the seven regions, placing the indicators in the two categories of health determinants (factors) and health

outcomes.¹¹ Additionally, the assessment team reviewed the state health rankings, county rankings for the state and set up charts that compare the key indicators across the seven established Missouri Behavioral Risk Factor Surveillance System (BRFSS) regions.

Table 2: Health Determinants and Outcomes Categories

Health Determinants and Outcomes Category	Number of Indicators	Sample Indicators
Social and Economic	5	Population; Average Household Income
Sexual Health	4	STDs/HIV
Mental Health, Heavy Alcohol Use, and Bullying	3	Depression, Heavy Drinking, Bullying
Clinical Care	3	Hospitalization, ER Visits
Mortality	7	Overall, Cancer, Heart Disease

Results

Missouri's National Health Ranking

The health outcomes for citizens of the State of Missouri consistently rank in the bottom one-third of overall health status when compared to other states and the District of Columbia.¹² In the 2012 America's Health Ranking Report, the rankings for Missouri's health determinants range from 23rd (low birth weight) to 46th (immunization coverage), while the health outcome indicators range from 29th (geographic disparity) to 41st (premature deaths).¹³

These rankings include: 39th for cancer deaths (196.1 deaths per 100,000 population); 41st for premature death (8,409 years lost per 100,000 population); 41st for cardiovascular deaths (298.3 deaths per 100,000 population); and 34th for poor mental health days (4.1 days in previous 30 days). Figure 2 shows the comparison between Missouri and the number one best ranked state (Vermont), on cancer and cardiovascular deaths.

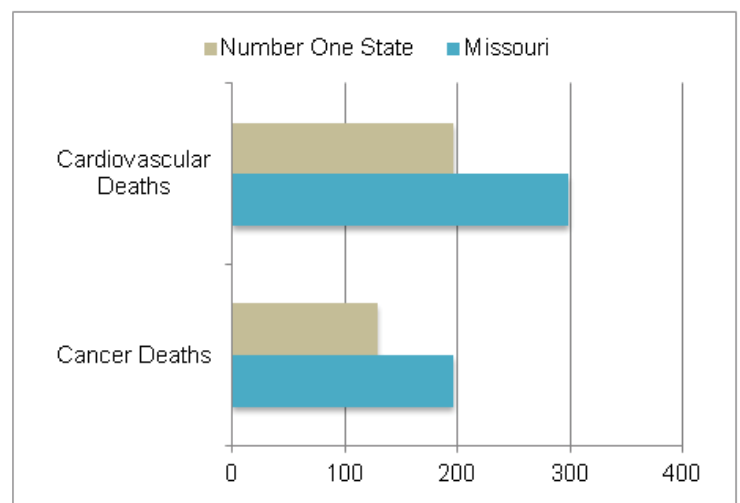


Figure 2: Cardiovascular/Cancer Deaths Per 100,000

Source: America's Health Rankings Report, 2012

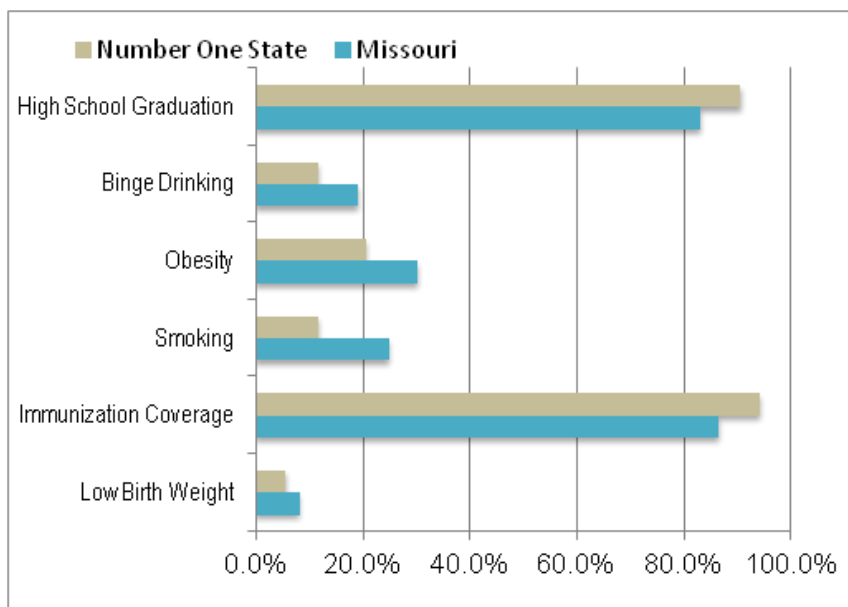


Figure 3: Health Determinants

Source: America's Health Rankings Report, 2012

Comparisons between the number one best ranked state and Missouri on several health determinants are shown in Figure 3.

Economic status and health are inextricably linked, with a person's income level being associated with both health determinants and outcomes.¹⁴ While the current unemployment rate in Missouri dropped to 7.6 percent in 2012, the number of people living below the federal poverty level (15.8 percent) and the percentage of uninsured Missourians (19.9 percent) have both increased since 2009.¹⁵ The growth in the uninsured may be linked to the decrease in Medicaid coverage in 2005 and the decrease in the number of Missourians with employer-sponsored coverage.¹⁶ Poverty is distributed very unevenly within the state. In 2011, poverty rates ranged from only 6.0 percent in St. Charles County to 31.8 percent in Pemiscot County. Overall, the 2011 poverty rate for African-Americans (30.2 percent) was nearly twice that of all Missourians (15.8 percent). These state ranking outcomes led the Partners Group to establish a health improvement vision statement that includes moving the State of Missouri into the top 10 rankings in 10 years.

Missourians also have challenges with behaviors and risk factors that determine health outcomes. Missouri ranks 42nd and 39th, respectively for the percentage of its population that smokes (25 percent) and that is obese (30.3 percent). Missouri also has rankings in the lower quartile for preventable hospitalizations (39th), infectious disease (43rd) and immunization coverage of children (46th).

The Health of Missourians Across Regions and Race

The quality of life and health of Missourians are presented in six categories that reveal both risk factors and outcomes: 1) Social and Economic, 2) Health Determinants, 3) Mortality, 4) Sexual Health, 5) Clinical Care, and 6) Mental Health, Drugs, and Bullying. Missourians engage in various risk behaviors and experience varying levels of the social and economic factors that impact their health outcomes, based on their regions of residence and their race. The same applies to mortality, sexual health, and drug arrests outcomes. The worst burden of risks and adverse outcomes in the State of Missouri are with citizens in the Southeast region. Moreover, the health outcomes across several indicators are worse for African Americans than for all Missourians.

Appendix B

State Public Health System Assessment Findings

Background

The state public health system assessment offers a comprehensive review of all of the organizations and entities that contribute to the public health system as illustrated in Figure 1. The assessment answers questions related to the activities, competencies, and capacities of the system and how the Essential Public Health Services (EPHS) are performed in the state. DHSS utilized the National Public Health Performance Standards (NPHPS) instrument to assess the state Public health system. The NPHPS assessment instrument uses the EPHS as a framework.

Data Collection and Analyses

A meeting of the Public Health System Partners Group and DHSS staff was held during March 2013 to provide basic information on the core public health functions, the elements of the NPHPS assessment, and to conduct the NPHPS assessment. The meeting provided background on the core public health functions, the related 10 Essential EPHS and allowed for a discussion on the specific roles of the Partners Group in that context. Five small groups were established to complete the assessment components. Structured assignments related to the completion of the

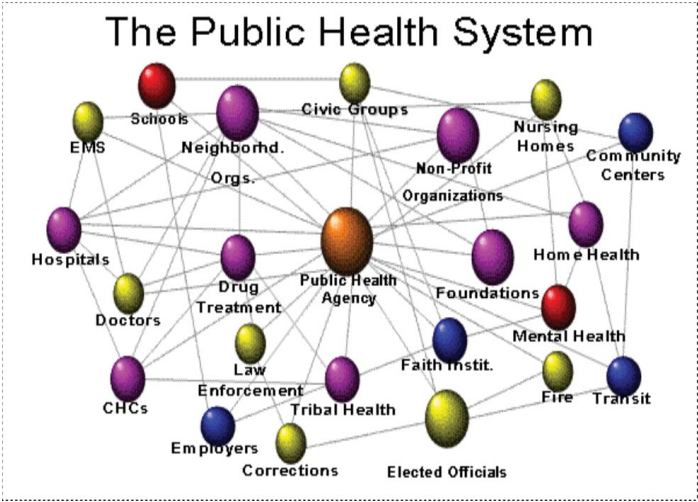


Figure 1-Public Health System (Centers for Disease Control and Prevention)

10 survey components were given. Each group completed two essential service areas as proposed by the NPHPS Program.

Within the instrument, each EPHS includes four model standards that describe the key aspects of an optimally performing public health system. Each model standard is followed by assessment questions that serve as measures of performance. The responses to these questions should

Table 1 - NPHPSP Survey Responses

NO ACTIVITY	0% or absolutely no activity.
MINIMAL ACTIVITY	Greater than zero, but no more than 25% of the activity described within the question is met.
MODERATE ACTIVITY	Greater than 25%, but no more than 50% of the activity described within the question is met.
SIGNIFICANT ACTIVITY	Greater than 50%, but no more than 75% of the activity described within the question is met.
OPTIMAL ACTIVITY	Greater than 75% of the activity described within the question is met.

Results

Using the responses to all of the assessment questions, a scoring process generates scores for each first-tier or “stem” question, model standard, essential service, and one overall score. Each question and sub-question uses a five-point, Likert-type response option that indicates the extent to which the activity is performed by the public health system. A numeric value is assigned to each response option as follows:

Response Option	Response Value
No Activity	0.00
Minimal Activity	0.25
Moderate Activity	0.50
Significant Activity	0.75
Optimal Activity	1.00

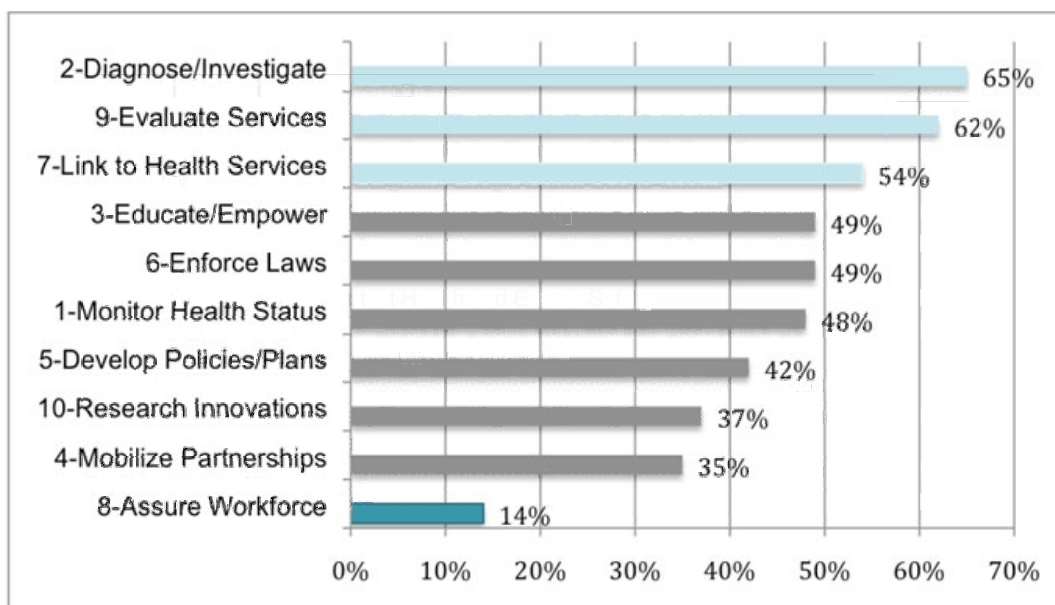
The State of Missouri public health system has an overall performance score of 46 percent, which translates to moderate activity. Table 2 provides a brief overview of the system’s performance in each of the 10 EPHS. Each EPHS score is a composite value determined by the scores given to those activities that contribute to each Essential Service. These scores range from a minimum value of 0 percent (absolutely no activity is performed pursuant to the standards) to a maximum of 100 percent (all activities associated with the standards are performed at optimal levels). Missouri’s range is from 14 percent (8-Assure Workforce) to 65 percent (2-Diagnose and Investigate).

The scoring methodology for the assessment instrument establishes a weight for each question, and then multiplies the weight by the response value to obtain a weighted value for each question. These weighted values are combined to construct performance scores for each indicator and each EPHS, along with an overall performance score.

Table 2–EPHS Scores

Essential Public Health Services		Score
1	Monitor Health Status to Identify Community Health Problems	46
2	Diagnose and Investigate Health Problems and Health Hazards	65
3	Inform, Educate, and Empower People About Health Issues	49
4	Mobilize Community Partnerships to Identify and Solve Health Problems	35
5	Develop Policies and Plans that Support Individual and Community Health Efforts	42
6	Enforce Laws that Protect Health and Ensure Safety	49
7	Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable	54
8	Assure a Competent Public Health and Personal Health Care Workforce	14
9	Evaluate Effectiveness, Accessibility, and Quality Personal and Population-Based Health Services	62
10	Research for New Insights and Innovative Solutions to Health Problems	37
Overall Performance Score		46

Figure 2 displays each composite score from low to high, allowing easy identification of service domains where performance is relatively strong or weak. The color-coded bars make it easier to identify which of the Essential Services fall in the five categories of performance activity. The scores show that the weakest essential service area is assuring the competence of the workforce and the strongest is diagnosing and investigating issues and problems.



No Activity ■ Minimal Activity ■ Moderate Activity ■ Significant Activity ■ Optimal Activity ■

Figure 2: Ranked EPHS Scores

Figure 3 offers a summary of the average scores for all 10 essential service areas across the four model standard, showing performance management and quality improvement as the lowest score at 38 percent (moderate) and planning and implementation at 56 percent (significant).

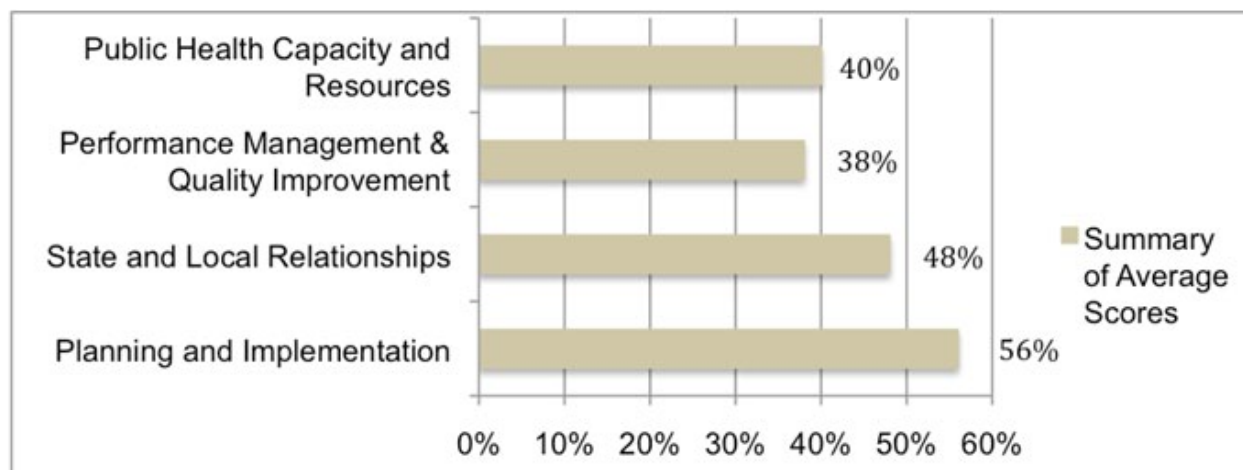


Figure B.2–Model Standard Average Scores for All EPHS

Appendix C

Community Themes and Strengths Assessment Findings

Background

The community themes and strengths assessments offer a comprehensive understanding of the issues citizens and stakeholders feel are important by answering questions related to issues, perceptions about quality of life in the state, and assets that can be used to improve the health of citizens in the state. Citizen focus groups were conducted in eight regions of the state and stakeholders from across the state were interviewed to gather this information.

Data Collection and Analysis

Qualitative research takes place in natural settings (i.e. the community of interest), uses open-ended methods, and is emergent rather than premeditated.¹⁷ The analysis process is inductive and requires the investigators to engage in their interpretation of the datasets. Members of the assessment team thoroughly read all the focus group and interview transcripts at least two times, focusing on the overall questions. Each reviewer generated coding themes after the second review. The codes were converted to categories and the most salient chunks of data were placed under categories. The lead investigator reviewed these preliminary analyses from each reviewer, determined points of convergence and established a final set of themes.

Citizen Focus Groups

The criteria for the participation in the focus groups were; 1) must be a resident of the State of Missouri, 2) aged 18 or older and 3) willing to participate in the two-hour informational focus group meeting. The recruitment process involved the dissemination of informational flyers through e-mail and fax to the 115 local public health agencies and to more than 160 non-government entities in the eight communities that hosted focus groups. These yielded 110 citizens who participated in the two-hour meetings. The map in Figure 1 shows the locations across the state.

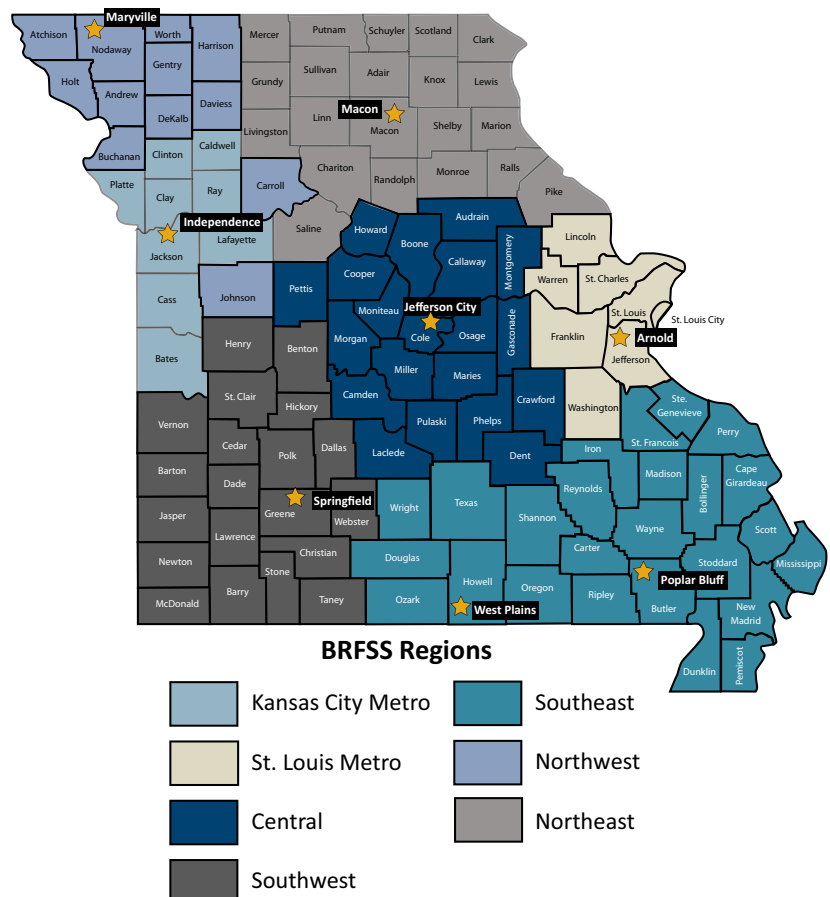
The assessment team facilitated the citizen focus

groups. The meetings included two components: 1) a review of the health indicators for the region of each meeting, and 2) the focus group discussion. The citizens were shown a slide presentation that offered definitions, showed the indicators and explained the purpose of the focus groups.

It was explained that no names would be used that could link any participant either directly or indirectly to comments. Each focus group was conducted using a structured discussion guide. The focus group component of the meeting was approximately 45 to 60 minutes in duration. The sessions were tape-recorded with the consent of the citizens. The focus groups yielded more than 155 pages of transcripts.

Figure 1—State Map with Focus Group Sites

★ Health Assessment Focus Group Locations - Cities



Stakeholder Interviews:

The assessment team contacted representatives from more than 195 partner organizations with a request for individuals to participate in 30-minute, one-on-one interviews related to their perceptions and beliefs about health issues, assets, challenges, and strategies in their respective regions of the state. Positive responses were received from 30 professionals in all seven regions of the state. Twenty three interviews were conducted with 23 professionals. Seven were nonresponsive or cancelled. The information in Table 1 shows the professional categories of interviewees.

The investigators conducted the interviews with 23 stakeholders-key informants via phone. With the consent of the interviewees, they taped each interview, which lasted between 20-40 minutes. The interviews yielded approximately 135 pages of transcripts.

Category	Number
Local Public Health Administrator/State Health	11
Statewide Association Leader	3
Health Providers (Private and Clinics)	7
Community-Based Providers	2
Total	23

Results

Citizen Focus Groups:

The perceptions, beliefs, and needs shared by the Missouri citizens in the eight focus groups converged into eight common themes:

Health Insurance	Jobs
Public Entitlement Benefits	Mental Health and Substance Abuse
Healthy Lifestyle	Public Awareness and Training
Seniors	Policy Makers

Table 2 shows a summary of specific information on each focus group.

Location	Date	Number	Key Issues	Proposed Solutions
Arnold	4/22/13	15	Insurance, Health Care Costs, and Economics	Public Awareness and Training, Greater Political Will and Transparency
Independence	4/8/13	12	Insurance, Economics and Public Entitlement Benefits	Public Awareness and Training and Improved Access to Public Entitlement Benefits
Jefferson City	4/15/13	16	Insurance and Health Care Costs	Public Awareness and Training and Greater Political Will and Transparency
Macon	4/18/13	16	Economics, Insurance, Substance Abuse; Mental Health, Provider Shortage and Quality	Public Awareness and Training and Jobs
Maryville	4/11/13	10	Insurance and Elderly	Sustain the Funding for Needed Services and Public Awareness and Training
Poplar Bluff	4/24/13	12	Economics, Mental Health, Substance Abuse, Insurance, and Health Care Costs	Public Awareness and Training, Jobs, and More Spirituality
Springfield	4/1/13	15	Insurance, Public Entitlement Benefits, and Economics	Fraud Reduction and Public Awareness and Training
West Plains	4/4/13	14	Insurance, Public Entitlement Benefits, and Economics	Jobs and Public Awareness and Training

Stakeholder Interviews:

The citizens' perceptions related to the impact of economics and lack of insurance converge with the health status indicators that show the decline in insurance and increase in persons living below the poverty level. They shared common stories about the fiscal and emotional pressure of lost jobs and lack of health insurance. Many with insurance are overwhelmed by extremely high deductibles. Citizens also revealed their dismay over the chronic disease and mortality burdens in Missouri and believe that economic issues take precedence over their health outcomes. They described how expensive it is to live healthy, given the high cost of nutritious foods and the lack of safe and affordable venues for physical activity. However, they expressed a need for public awareness and training about health issues and available health services.

The perceptions, opinions, and beliefs of the professional stakeholders are thoughtful and based on their direct experiences in public health, community-based health services, social work, social services and health services. Seven common themes emerged from the analyses of the interview transcripts:

- Modifiable Risk Factors
- Health Services Access and Cost Issues
- Fragile Populations
- Inadequate Resources
- Emerging Mental Health Issues
- Commitment and Collaboration
- Innovative Solutions

Table 3 shows the summary of outcomes from the stakeholder interviews.

Table 3: Stakeholder Interview Themes and Summary

Themes	Summary Statements of Perceptions
Modifiable Risk Factors	Smoking, nutrition, physical activity, screenings and adequate prenatal care are health behaviors that require attention in most regions.
Health Services Access and Cost Issues	Those without insurance have difficulty getting health and dental services.
Fragile Populations	The poor, unemployed, underemployed, women with children, immigrants and the elderly have difficulties accessing services.
Inadequate Resources	Many agencies face funding challenges and are concerned about future financial resources in the face of federal sequestration and fiscal uncertainties.
Emerging Mental Health Issues	More of the agencies' consumers are requesting and needing services for depression, substance abuse and other mental health complaints.
Commitment and Collaboration	Most organizations are forming collaborations and partnerships to assure that they can meet their missions.
Innovative Solutions	Several organizations described innovative projects and interventions that can be diffused throughout the state. The Missouri Foundation for Health is viewed as a strong asset across the state.

Appendix D

Forces of Change Assessment Findings

Background

The forces of change assessment focuses on the identification of forces such as legislation, technology, and other impending changes that affect the context in which the community and its public health system operates. The assessment answers two primary questions:

1. What is occurring or might occur that affects the health of our community or the local public health system?
2. What specific threats or opportunities are generated by these occurrences?

Data Collection and Analyses

The assessment team planned and facilitated a one-day meeting in May 2013 that involved 26 members of the Public Health System Partners Group. The group completed self-guided tasks in four separate work groups using structured worksheets. They defined threats and opportunities in the categories listed below. The following categories were defined and used in the completion of the worksheets:

Social—The relationship between individuals and groups.

Economic—Resources, employment, wealth and funding.

Political—Policies, laws, legislative actions, and the individuals/groups that control the legislative system.

Environmental—The built, natural and social systems that individuals and groups inhabit.

Legal—judicial and justice system, norms, and values

Ethical—The rules and standards for right conduct and integrity.

The assessment team conducted a content analysis of the worksheets, identifying common themes across the various components.

Results

The Partners Group identified three primary threats that impact the health status of the citizens of Missouri and the public health system:

- The economic downturn and budget cuts in

both the state and the U.S. adversely affect services to the most vulnerable populations and undermine past achievements.

- Lawmakers don't understand the value of public health and the policies in the state confound and perpetuate growing economic gaps that lead to "haves and have-nots".
- Organizations are engaged in competition for limited resources to meet their respective missions, and such an environment inhibits collaborative partnerships.

The group welcomed the opportunity to explore assets and opportunities and they offered a list of organizations and circumstances that could facilitate efforts to improve the public health system and consequently the overall health and well-being of Missourians:

- The 115 local public health agencies and their commitment to serving, assuring, and protecting the health of their consumers;
- The Missouri Foundation for Health has been a major force in the provision of funding and technical assistance that fill gaps in services and support innovation;
- The ability to collaborate with diverse state agencies (e.g. Mental Health, Social Services, Public Safety, Economic Development), nontraditional partners, and stakeholders across the state; and
- The structure and activities of the national



The Public Health System Partners Group considered this assessment and implications when developing goals and objectives for this plan. The forces of change are summarized below by priority health issues.

Priority Issue 1 – Access to Health Care

Health Services Access and Cost:

Missouri Forces of Change That May Impact Strategies to Respond to the Health Services Access and Cost Issues	Missouri Current Assets that May Facilitate the Strategies to Respond to the Health Services Access and Cost Issues
<ul style="list-style-type: none"> • Recession and budget cuts • Loss of jobs and insurance placing stress on the healthcare safety net • Aging population and end of life issues • Debates about care priority based on lifespan (children versus the elderly) • Decrease in providers that accept Medicaid 	<ul style="list-style-type: none"> • Innovative initiatives from national and state foundations • Implementation of the Affordable Care Act of 2010 • State and federal legislative advocacy • State Medicaid Program • Federally Qualified Health Centers • Hospitals and the Missouri Hospital Association • Community based charitable care from individual providers

Uninsured:

Missouri Forces of Change That May Impact Strategies to Respond to the Uninsured Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Uninsured Issue
<ul style="list-style-type: none"> • Antigovernment Sentiments • Fewer factories and jobs with benefits • Recession • Increasing disparities in wealth and economic opportunities • Government regulations that restrict business • Aging population 	<ul style="list-style-type: none"> • Innovative initiatives from national and state foundations • Increased push for living wages • Implementation of the Affordable Care Act of 2010 • State and federal legislative advocacy • State Medicaid Program • Federally Qualified Health Centers • Hospitals and the Missouri Hospital Association

Economics:

Missouri Forces of Change That May Impact Strategies to Respond to the Economics Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Economics Issue
<ul style="list-style-type: none"> • National and local recession • Jobs and businesses retreating from rural areas of the state • Increasing gap between the haves and have-nots. • Full time jobs with living wages being replaced by part-time low wage jobs • Multi-generational poverty 	<ul style="list-style-type: none"> • Community and financial resources that are available from the Missouri Department of Economic Development • Services and programs offered by the Missouri Division of Workforce Development • Programs and activities of the Missouri Economic Development Council (http://www.showme.org/)

Priority Issue 2 – Modifiable Risk Factors

Obesity:

Missouri Forces of Change That May Impact Strategies to Respond to the Obesity Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Obesity Issue
<ul style="list-style-type: none"> • Low public health funding that yield competition instead of collaboration • Value judgments placing blame on the individual • Policymakers that don't understand the importance of public health • Lack of health promoting legislation • Individuals who believe living healthy (nutrition and physical activity) competes with other essential needs 	<ul style="list-style-type: none"> • Community based coalitions • Community level academic research • Food system changes that focus on local grown foods • Infrastructure and environmental initiatives that focus on streets, sidewalks and green space • Local Public Health Systems and their current activities • Health care providers that focus on prevention • Social Media strategies

Smoking:

Missouri Forces of Change That May Impact Strategies to Respond to the Smoking Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Smoking Issue
<ul style="list-style-type: none"> • Individuals not understanding risky health behaviors and the impact on their health • Low public health funding that yield competition instead of collaboration • Value judgments placing blame on the individual • Policymakers that don't understand the importance of public health • Lack of health promoting legislation 	<ul style="list-style-type: none"> • Community based coalitions • Community level academic research • Local Public Health Systems and their current activities • Health care providers that focus on prevention • Social Media strategies

Modifiable Risk Factors:

Missouri Forces of Change That May Impact Strategies to Respond to the Modifiable Risk Factors Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Modifiable Risk Factors Issue
<ul style="list-style-type: none"> • Low public health funding that yields competition instead of collaboration • Value judgments placing blame on the individual • Policymakers that don't understand the importance of public health • Lack of health promoting legislation • Individuals who believe living healthy competes with other essential needs 	<ul style="list-style-type: none"> • Community based coalitions • Community level academic research • Infrastructure and environmental initiatives • Local Public Health Systems and their current activities • Health care providers that focus on prevention • Social Media strategies

Mental Health and Substance Abuse:

Missouri Forces of Change That May Impact Strategies to Respond to the Modifiable Risk Factors Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Modifiable Risk Factors Issue
<ul style="list-style-type: none"> • Low public health funding that yields competition instead of collaboration • Value judgments placing blame on the individual • Policymakers that don't understand the importance of public health • Lack of health promoting legislation • Individuals who believe living healthy competes with other essential needs 	<ul style="list-style-type: none"> • Community based coalitions • Community level academic research • Infrastructure and environmental initiatives • Local Public Health Systems and their current activities • Health care providers that focus on prevention • Social Media strategies

Priority Issue 3 – Infrastructure

Partnership/Collaboration:

Missouri Forces of Change That May Impact Strategies to Respond to the Partnership/Collaboration Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Partnership/Collaboration Issue
<ul style="list-style-type: none"> Limited funds and resources that lead to competition versus collaborations Historical trust issues between government agencies and community groups Historical trust issues between academic centers and community groups Funding that promotes the segregation of issues that have common risk factors and silo type strategies Systems that are overwhelmed by consumers that are sicker with greater social and economic needs 	<ul style="list-style-type: none"> Emerging funding trends that require collaboration Organizational need to collaborate and partner to meet mission Using technology and new media strategies to support collaborative partnerships Using the national accreditation process to build and sustain collaborative partnerships

Workforce:

Missouri Forces of Change That May Impact Strategies to Respond to the Assure Workforce Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the Assure Workforce Issue
<ul style="list-style-type: none"> Cuts and reduction in public health funding Policy makers who do not understand and/or support public health. Decreasing number of young people being trained in the public health field, combined with an older public health workforce that will retire, soon 	<ul style="list-style-type: none"> Forming more innovative partnerships between Schools of Public Health, state agencies, colleges, schools, and other partners in the public health system Support for increased federal incentives for those entering and completing public health and health care training The Affordable Care Act of 2010 creates new programs that support workforce expansion and development

Performance Management and Quality Improvement:

Missouri Forces of Change That May Impact Strategies to Respond to the PM and QI Issue	Missouri Current Assets that May Facilitate the Strategies to Respond to the PM and QI Issue
<ul style="list-style-type: none"> Cuts and reduction in public health funding State cuts to the department of health leading to a reduction in workforce and resources 	<ul style="list-style-type: none"> The national accreditation process and strategies that engages the department staff and stakeholders from multiple sectors of the state public health system. The department has an existing office focuses on performance and quality improvement Support from the Governor and the Director of DHSS

Appendix E

Missouri Public Health System Partners Group

External Stakeholders

Columbia-Boone County Department of Public Health and Human Services
Joplin City Health Department
Leading Age Missouri
Mission Missouri
Missouri Association of Local Public Health Agencies
Missouri Association of Osteopathic Physicians and Surgeons
Missouri Association of Area Agencies on Aging
Missouri Association of Social Welfare
Missouri Coalition for Oral Health Access
Missouri Council for Activity and Nutrition (MoCAN)
Missouri Department of Elementary and Secondary Education
Missouri Department of Mental Health
Missouri Department of Social Services, MO HealthNet
Missouri Development Disabilities Council
Missouri Emergency Medical Association
Missouri Family Health Council
Missouri Foundation for Health
Missouri Hospital Association
Missouri Immigrant and Refugee Advocates
Missouri Institute for Community Health
Missouri Primary Care Association
Missouri State Medical Association
Ozarks Public Health Institute, Missouri State University
Primaris – Missouri’s Quality Improvement Organization
Prevention Research Center – St. Louis
Saint Louis University, College for Public Health and Social Justice
Tobacco Free Missouri
University of Missouri-Columbia, Public Health Program
Washington University, Center for Community Health and Partnerships, Institute for Public Health
Washington University School of Medicine, Division of Public Health Sciences

Department of Health and Senior Services

Division of Administration

Division of Community and Public Health

- The former Center for Emergency Response and Terrorism, now the Office of Emergency Coordination
- Center for Local Public Health Services
- Section for Community Health and Chronic Disease Prevention
- Section for Disease Prevention
- Section for Epidemiology for Public Health Practice
- Section for Healthy Families and Youth
- Office of Epidemiology

Division of Regulation and Licensure

- Section for Long Term Care Regulation

Division of Senior and Disability Services

- Bureau of Senior Programs

Office of the Director

- Office of General Counsel
- Office of Human Resources
- Office of Performance Management
- Office of Primary Care and Rural Health
- Office of Public Information
- Office on Women’s Health
- State Public Health Laboratory

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Missouri Health Improvement Plan



Missouri Department of Health and Senior Services
Office of Performance Management
P. O. Box 570
Jefferson City, MO 65102-0570
573.751.6459
health.mo.gov
performdo@health.mo.gov

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